

## Refine Search

### Search Results -

Terms	Documents
(stem or hypocotyl) and L11	32

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
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 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

chimera and L12

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DATE: Friday, September 24, 2004 [Printable Copy](#) [Create Case](#)

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DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

<u>L12</u>	(stem or hypocotyl) and L11	32	<u>L12</u>
<u>L11</u>	agrobacterium adj rhizogenes	179	<u>L11</u>
<u>L10</u>	l3	0	<u>L10</u>

DB=USPT; PLUR=YES; OP=OR

<u>L9</u>	(chimeric adj plant) and l5	34	<u>L9</u>
<u>L8</u>	(chimeric plant) and l5	493	<u>L8</u>
<u>L7</u>	(chimeric or chimera) and l5	302	<u>L7</u>
<u>L6</u>	chimer\$ and l5	307	<u>L6</u>
<u>L5</u>	l3 and (stem or hypocotyl)	503	<u>L5</u>
<u>L4</u>	(A. rhizogenes)	4665	<u>L4</u>
<u>L3</u>	agrobacterium adj rhizogenes	813	<u>L3</u>
<u>L2</u>	agrobacterium adj rhizogenesL1	0	<u>L2</u>
<u>L1</u>	rhizogenes	1449	<u>L1</u>

Terms	Documents
(stem or hypocotyl) and L11	32

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Search Results - Record(s) 31 through 32 of 32 returned.

☐ 31. Document ID: JP 63039595 A

L12: Entry 31 of 32

File: DWPI

Feb 20, 1988

DERWENT-ACC-NO: 1988-088333

DERWENT-WEEK: 198813

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TITLE: Tropane alkaloid biosynthesis from Solanaceae plant - using plasmid held on agrobacterium rhizo-genes and culturing on liq. medium

PRIORITY-DATA: 1986JP-0181532 (August 1, 1986)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 63039595 A	February 20, 1988		008	

INT-CL (IPC): A01G 1/00; A01H 1/00; A01N 63/00; C12N 5/00; C12N 15/00; C12P 17/10; C12R 1/91

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Summary	Claims	KWIC	Draw. Data
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☐ 32. Document ID: JP 59161306 A

L12: Entry 32 of 32

File: DWPI

Sep 12, 1984

DERWENT-ACC-NO: 1984-265864

DERWENT-WEEK: 198443

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TITLE: Accelerating plant growth -by inoculating cultivated plant with Agrobacterium rhizogenes

PRIORITY-DATA: 1983JP-0034237 (March 1, 1983)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 59161306 A	September 12, 1984		003	

INT-CL (IPC): A01G 7/06; A01N 63/02

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Summary	Claims	KWIC	Draw. Data
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L12: Entry 22 of 32

File: DWPI

Jun 22, 1990

DERWENT-ACC-NO: 1990-235292

DERWENT-WEEK: 199706

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TITLE: Prodn. of clone plants without using plant hormones - by transforming tobacco plants with agrobacterium rhizogenes and incubating

PRIORITY-DATA: 1988JP-0316007 (December 14, 1988)

Search Selected

Search ALL

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## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/> <a href="#">JP 02163016 A</a>	June 22, 1990		000	
<input type="checkbox"/> <a href="#">JP 2568660 B2</a>	January 8, 1997		005	A01H001/00

INT-CL (IPC): A01H 1/00; C12N 5/04

ABSTRACTED-PUB-NO: JP 02163016A

## BASIC-ABSTRACT:

In prodn. of clone plants, pieces of organs of tobacco plants are transformed with bacteria of Agrobacterium rhizogenes and then incubated, and the shoots produced from the pieces are incubated.

Typically, the tobacco plant is Nicotiana tabacum. Pref. Agrobacterium rhizogenes MAFF03-01724, MAFF03-01725, MAFF03-01726, MAFF03-01727 is applied to leaves, stems or roots, esp. to leaves. Incubation of the transformant pieces is pref. effected in Murashige-Skoog (MS) medium.

USE/ADVANTAGE - A lot of clone plants are directly obtd. from organs (leaves, stems, roots) of tobacco plants in a short period of time, without use of plant hormones (auxin, cytokinin) and without formation of calluse.

ABSTRACTED-PUB-NO: JP 02163016A

## EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/0

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L12: Entry 20 of 32

File: DWPI

Sep 13, 1990

DERWENT-ACC-NO: 1990-324158

DERWENT-WEEK: 199043

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TITLE: Tanshinone prepn. - by culturing section of differentiation induce adventitious roots

Basic Abstract Text (2):

Pref. culture is hair roots transformed and induced by Ri plasmid retained by Agrobacterium rhizogenes are used. Tanshinones are secreted into medium, with solid or liq medium is used.

Basic Abstract Text (4):

In an example, shoot apex of Salvia miltiorrhiza was treated with 75% etOH, sterilised H<sub>2</sub>O, 10% Na-hypochlorite in order, then cut at ca. 2 mm, and cultured on kinetin, indole acetate added Murashige-Skoog (MS) solid medium. (A) Obtd. foliage was cut to apical buds and nodes and cultured on MS medium, then petioles were cultured on various concn. auxins and cytokinins added MS. Gamborg B5 (B5) medium at 25 deg.C for 4-8 weeks in dark place. Obtd. adventitious roots were subcultured. (B) Hair roots introduced by inoculation of Ri plasmid retaining Agrobacterium rhizogenes ATCC 15834 to the sterilised plants stems, leaves, petioles, etc. After 2-8 weeks, induced hair roots were implanted to claforan contg. MS solid medium and cultured for 1-2 weeks 2-3 times. The part of hair roots was implanted to MS medium, and shaking cultured at 25 deg.C in dark place for 4-8 hours. Grown wt. of culture were measured. Formed No. of adventitious roots wer ca. 10-100. Contents of tanshinone I was 0.013% (against dry wt.). Hair roots cultured in MS liq. medium was 1-4 g (fresh wt.). from 100 mg hair roots. Contents of tanshinones were analysed.

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L12: Entry 19 of 32

File: DWPI

Sep 23, 1990

DERWENT-ACC-NO: 1991-155208

DERWENT-WEEK: 199121

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TITLE: Beta-carboline alkaloid prepn. - involves induction of rhizogenesis in Peganum harmala cells using virulent strain of Agrobacterium rhizogenes

Basic Abstract Text (1):

Beta-carboline alkaloids are obtd. using Peganum Harmala (wild rue) culture, having capability to synthesize alkaloids within whole plant. Rhizogenesis is induced into plant cells by infecting segments of hypocotyl of sterile seedlings with virulent strain Agrobacterium rhizogenes (strain A-4), carrying RI plasmid, and thus effecting transformation leading to formation of constantly growing rhizogeneous culture of high level of biosynthesis of beta-carbonyl alkaloids.

Standard Title Terms (1):

BETA CARBOLINE ALKALOID PREPARATION INDUCTION PEGANUM HARMALA CELL VIRULENT STRAIN  
AGROBACTERIUM RHIZOGENES

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L12: Entry 16 of 32

File: DWPI

Sep 7, 1993

DERWENT-ACC-NO: 1993-316538

DERWENT-WEEK: 199340

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TITLE: Transformant plant body of VINCA MINOR for cerebral blood stream improver  
mfr. - produced by transformation with hair-root inducing gene (rol gene)

Basic Abstract Text (4):

In an example, the top of the stem (1 cm) of Vinca minor cultured in a greenhouse was sterilised with 10% Na hypochlorite, then planted in a solidified hormone-free MS medium to obtain an aseptic plant body. The top of the aseptic plant body (3 cm) was cut out and cultured once every month. Then the stem including the node (1 cm) was immersed for 5 mins. in a suspension of Agrobacterium rhizogenes MAFF03-01724 possessing pRi1724 including the rol gene region. Then, the stem was embedded in 1% agar-agar, and cultured at 25 deg.C under illumination for 3 days to allow infection with the bacterium. then, the infected stem piece was transplanted in a solidified MS medium contg. NAA at 1 mg/l, and bancomycin at 500 microg and calbenicilin at 500 microg/l to eliminate the bacteria. The stem was then incubated at 25 deg.C in darkness for 2 weeks to induce hair roots. Hair roots obtd. were cut out and cultured for one month in an MS medium contg. NAA at 1 mg/l, and young plant was reproduced. The young plant was then transplanted in a solidified hormone-free MS medium and cultured at 25 deg.C under illumination. A complete plant body was obtd. The obtd. plant body was subcultured in a solidified hormone-free MS medium for one month.

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L9: Entry 11 of 34

File: USPT

Jan 16, 2001

DOCUMENT-IDENTIFIER: US 6174724 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Chimeric genes suitable for expression in plant cells

Detailed Description Text (122):

If desired, any DNA sequence may be modified by substituting certain bases for the existing bases. Such modifications may be performed for a variety of reasons. For example, one or more bases in a sequence may be replaced by other bases in order to create or delete a cleavage site for a particular endonuclease. As another example, one or more bases in a sequence may be replaced in order to reduce the occurrence of "stem and loop" structures in messenger RNA. Such modified sequences are within the scope of this invention.

Other Reference Publication (15):

Chilton et al. (1982) "Agrobacterium rhizogenes inserts T-DNA into the genomes of the host plant root cells," Nature 295:432-434.

## CLAIMS:

1. A chimeric plant-expressible gene, said gene comprising in the 5' to 3' direction:

(a) a promoter region derived from a gene that is naturally expressed in a plant cell and that is capable of effecting mRNA transcription in the selected plant cell to be transfected, operably linked to

(b) a structural DNA sequence encoding a polypeptide that permits the selection of transformed plant cells containing said chimeric gene by rendering said transformed plant cells resistant to an amount of an antibiotic that would be toxic to non-transformed plant cells, operably linked to

(c) a non-translated region of a gene naturally expressed in plant cells, said region encoding a signal sequence for polyadenylation of mRNA.

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NEWS 10 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal  
status data from INPADOC  
NEWS 11 SEP 01 INPADOC: New family current-awareness alert (SDI) available  
NEWS 12 SEP 01 New pricing for the Save Answers for SciFinder Wizard within  
STN Express with Discover!  
NEWS 13 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX  
NEWS 14 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ  
  
NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004  
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FILE 'AGRICOLA' ENTERED AT 19:08:20 ON 24 SEP 2004

FILE 'BIOSIS' ENTERED AT 19:08:20 ON 24 SEP 2004  
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=> s agrobacterium rhizogenes  
 L1 5289 AGROBACTERIUM RHIZOGENES

=> s stem or hypocotyl and l1  
 L2 385616 STEM OR HYPOCOTYL AND L1

=> s (stem or hypocotyl) and l1  
 L3 649 (STEM OR HYPOCOTYL) AND L1

=> s K599  
 L4 30 K599

=> s l1 and l4  
 L5 26 L1 AND L4

=> dup rem l5  
 PROCESSING COMPLETED FOR L5  
 L6 14 DUP REM L5 (12 DUPLICATES REMOVED)

=> d 1-14

L6 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1  
 AN 2004:611695 CAPLUS  
 TI Use of the tobacco feedback-insensitive anthranilate synthase gene (ASA2)  
 as a selectable marker for legume hairy root transformation  
 AU Cho, H.-J.; Brotherton, J. E.; Widholm, J. M.  
 CS Department of Crop Sciences, ERML, University of Illinois, Urbana, IL,  
 61801, USA  
 SO Plant Cell Reports (2004), 23(1-2), 104-113  
 CODEN: PCRPD8; ISSN: 0721-7714  
 PB Springer GmbH  
 DT Journal  
 LA English  
 RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 14 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on  
 STN  
 AN 2003:313612 BIOSIS  
 DN PREV200300313612  
 TI Stable transformation of C. annuum and C. baccatum explants inoculated  
 with A. rhizogenes and A. tumefaciens.  
 AU Valera, Luis [Reprint Author]; Phillips, Gregory C. [Reprint Author]  
 CS Molecular Biology Program, New Mexico State University, Las Cruces, NM,  
 88003, USA

grphilli@nmsu.edu

SO In Vitro Cellular & Developmental Biology Plant, (Spring 2003) Vol. 39,  
No. Abstract, pp. 42-A. print.  
Meeting Info.: Congress on In Vitro Biology. Portland, Oregon, USA. May  
31-June 04, 2003. Society for In Vitro Biology.  
ISSN: 1054-5476 (ISSN print).

DT Conference; (Meeting)  
Conference; (Meeting Poster)  
Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 2 Jul 2003  
Last Updated on STN: 2 Jul 2003

L6 ANSWER 3 OF 14 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on  
STN

AN 2002:474962 BIOSIS

DN PREV200200474962

TI Comparison of Capsicum baccatum and C. annuum for stable transformation  
using **Agrobacterium rhizogenes**.

AU Valera, Luis; Phillips, Gregory C.

CS E-mail,  
grphilli@nmsu.edu

SO In Vitro Cellular and Developmental Biology Animal, (Spring, 2002) Vol.  
38, No. Abstract, pp. 139.A. print.  
Meeting Info.: 2002 Congress on In Vitro Biology. Orlando, FL, USA. June  
25-29, 2002.  
ISSN: 1071-2690.

DT Conference; (Meeting)  
Conference; Abstract; (Meeting Abstract)  
Conference; (Meeting Poster)

LA English

ED Entered STN: 11 Sep 2002  
Last Updated on STN: 11 Sep 2002

L6 ANSWER 4 OF 14 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on  
STN

AN 2002:410988 BIOSIS

DN PREV200200410988

TI Response of hairy roots of different soybean genotypes to Fusarium solani  
f. sp. glycines.

AU Li, S.; Lygin, A.; Zernova, O.; Lozovaya, V. [Reprint author]; Hartman, G.  
[Reprint author]; Widholm, J. [Reprint author]

CS Dept. Crop Sciences, University of Illinois, Urbana, IL, 61801, USA

SO Phytopathology, (June, 2002) Vol. 92, No. 6 Supplement, pp. S47. print.  
Meeting Info.: 2002 Annual Meeting of the American Phytopathological  
Society. Milwaukee, WI, USA. July 27-31, 2002.  
CODEN: PHYTAJ. ISSN: 0031-949X.

DT Conference; (Meeting)  
Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 31 Jul 2002  
Last Updated on STN: 31 Jul 2002

L6 ANSWER 5 OF 14 CABA COPYRIGHT 2004 CABI on STN

AN 2002:63284 CABA

DN 20023004053

TI Structure and activity of a soybean Adh promoter in transgenic hairy roots

AU Preiszner, J.; VanToai, T. T.; Huynh, L.; Bolla, R. I.; Yen, H. H.

CS Department of Horticulture and Crop Science, Plant Biotechnology Program,  
The Ohio State University, 590 Woody Hayes Dr, Columbus, OH 43210, USA.  
vantoai.1@osu.edu

SO Plant Cell Reports, (2001) Vol. 20, No. 8, pp. 763-769. 30 ref.

Publisher: Springer-Verlag. Berlin

ISSN: 0721-7714

CY Germany, Federal Republic of

DT Journal

LA English

ED Entered STN: 20020405

Last Updated on STN: 20020405

L6 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

AN 2001:699876 CAPLUS

DN 136:390833

TI Influence of different strains of **agrobacterium rhizogenes** on induction of hairy roots and artemisinin production in *artemisia annua*

AU Giri, Archana; Ravindra, Sarish T.; Dhingra, Vikas; Narasu, M. Lakshmi

CS Centre for Biotechnology, Jawaharlal Nehru Technological University, Hyderabad, 500 028, India

SO Current Science (2001), 81(4), 378-382

CODEN: CUSCAM; ISSN: 0011-3891

PB Current Science Association

DT Journal

LA English

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

AN 2001:682963 CAPLUS

DN 136:382870

TI Disarming of wild type **Agrobacterium rhizogenes** K599

AU Xiang, Taihe; Yang, Jianbo; Somers, David A.

CS Key Laboratory of Rice Genetics and Breeding of Agricultural Ministry, Rice Research Institute, Anhui Academy of Agricultural Sciences, Hefei, 230031, Peop. Rep. China

SO Yichuan (2001), 23(4), 336-340

CODEN: ICHUDW; ISSN: 0253-9772

PB Yichuan Zazhi Bianjibu

DT Journal

LA Chinese

L6 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:43482 CAPLUS

DN 136:246434

TI Enhanced podophyllotoxin production from **Agrobacterium rhizogenes** transformed cultures of *Podophyllum hexandrum*

AU Giri, Archana; Giri, C. C.; Dhingra, Vikas; Narasu, M. Lakshmi

CS Centre for Biotechnology, Jawaharlal Nehru Technological University, Hyderabad, 500 028, India

SO Natural Product Letters (2001), 15(4), 229-235

CODEN: NPLEEF; ISSN: 1057-5634

PB Harwood Academic Publishers

DT Journal

LA English

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:161473 CAPLUS

DN 132:190490

TI Transgene assay using stable **Agrobacterium rhizogenes** transformation of plant roots

IN Taylor, Christopher G.; Huang, Yong

PA Monsanto Co., USA  
 SO PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000012735	A2	20000309	WO 1999-US19745	19990831
	WO 2000012735	A3	20010531		
	W:				
	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2341324	AA	20000309	CA 1999-2341324	19990831
	AU 9962408	A1	20000321	AU 1999-62408	19990831
	EP 1119631	A2	20010801	EP 1999-949562	19990831
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	BR 9913651	A	20010925	BR 1999-13651	19990831
	JP 2002524056	T2	20020806	JP 2000-567721	19990831
PRAI	US 1998-98402P	P	19980831		
	WO 1999-US19745	W	19990831		

L6 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4  
 AN 2000:24187 CAPLUS  
 DN 132:205534  
 TI High-efficiency induction of soybean hairy roots and propagation of the soybean cyst nematode  
 AU Cho, Hyeon-Je; Farrand, Stephen K.; Noel, Gregory R.; Widholm, Jack M.  
 CS Department of Crop Sciences, University of Illinois, Urbana, IL, 61801, USA  
 SO Planta (2000), 210(2), 195-204  
 CODEN: PLANAB; ISSN: 0032-0935  
 PB Springer-Verlag  
 DT Journal  
 LA English  
 RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 14 CABA COPYRIGHT 2004 CABI on STN DUPLICATE 5  
 AN 2000:70714 CABA  
 DN 20001609542  
 TI Expression of soybean cyst nematode resistance in transgenic hairy roots of soybean  
 AU Narayanan, R. A.; Atz, R.; Denny, R.; Young, N. D.; Somers, D. A.  
 CS Department of Agronomy and Plant Genetics, University of Minnesota, St. Paul, MN 55108, USA.  
 SO Crop Science, (1999) Vol. 39, No. 6, pp. 1680-1686. 49 ref.  
 ISSN: 0011-183X  
 DT Journal  
 LA English  
 ED Entered STN: 20000609  
 Last Updated on STN: 20000609

L6 ANSWER 12 OF 14 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AN 2003:144250 BIOSIS  
 DN PREV200300144250  
 TI Induction of hairy roots with high transformation efficiency on soybean  
 genotypes and propagation of the soybean cyst nematode.  
 AU Cho, Hyeon-Je [Reprint Author]; Farrand, Stephen K. [Reprint Author];  
 Widholm, Jack M. [Reprint Author]; Noel, Greg R.  
 CS Dept. of Crop Sciences, University of Illinois, Urbana, IL, USA  
 hjecho@uiuc.edu  
 SO Plant Biology (Rockville), (1999) Vol. 1999, pp. 102. print.  
 Meeting Info.: Annual Meeting of the American Society of Plant  
 Physiologists. Baltimore, Maryland, USA. July 24-28, 1999. American  
 Society of Plant Physiologists (ASPP).  
 DT Conference; (Meeting)  
 Conference; Abstract; (Meeting Abstract)  
 LA English  
 ED Entered STN: 19 Mar 2003  
 Last Updated on STN: 19 Mar 2003

L6 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6  
 AN 1997:195433 CAPLUS  
 DN 126:169072  
 TI Stable vindoline production in transformed cell cultures of *Catharanthus*  
*roseus*  
 AU O'Keefe, Barry R.; Mahady, Gail B.; Gills, Joell J.; Beecher, Christopher  
 W. W.; Schilling, Alex B.  
 CS Department of Medicinal Chemistry and Pharmacognosy, University of  
 Illinois at Chicago, Chicago, IL, 60612, USA  
 SO Journal of Natural Products (1997), 60(3), 261-264  
 CODEN: JNPRDF; ISSN: 0163-3864  
 PB American Chemical Society  
 DT Journal  
 LA English

L6 ANSWER 14 OF 14 CABA COPYRIGHT 2004 CABI on STN DUPLICATE 7  
 AN 90:93979 CABA  
 DN 19901147341  
 TI Induction of hairy roots on cultivated soybean genotypes and their use to  
 propagate the soybean cyst nematode  
 AU Savka, M. A.; Ravillion, B.; Noel, G. R.; Farrand, S. K.  
 CS USDA, ARS, Department of Plant Pathology, University of Illinois, 1102  
 South Goodwin Avenue, N519 Turner Hall, Urbana, IL 61801, USA.  
 SO Phytopathology, (1990) Vol. 80, No. 5, pp. 503-508. 37 ref.  
 ISSN: 0031-949X  
 DT Journal  
 LA English  
 ED Entered STN: 19941101  
 Last Updated on STN: 19941101

=> d his

(FILE 'HOME' ENTERED AT 19:07:50 ON 24 SEP 2004)

FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 19:08:20 ON 24 SEP 2004

L1 5289 S AGROBACTERIUM RHIZOGENES  
 L2 385616 S STEM OR HYPOCOTYL AND L1  
 L3 649 S (STEM OR HYPOCOTYL) AND L1  
 L4 30 S K599  
 L5 26 S L1 AND L4  
 L6 14 DUP REM L5 (12 DUPLICATES REMOVED)

=> s (chimera or chimeric) and 13

L7 34 (CHIMERA OR CHIMERIC) AND L3

=> dup rem l7

PROCESSING COMPLETED FOR L7

L8 19 DUP REM L7 (15 DUPLICATES REMOVED)

=> d 1-19

L8 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

AN 2002:533523 CAPLUS

DN 137:335211

TI The use of **Agrobacterium rhizogenes** transformed roots  
to obtain transgenic shoots of the apple rootstock Jork 9

AU Pawlicki-Jullian, Nathalie; Sedira, Monika; Welandar, Margareta

CS IUT Genie Biologique, Amiens, F-80025, Fr.

SO Plant Cell, Tissue and Organ Culture (2002), 70(2), 163-171

CODEN: PTCEDJ; ISSN: 0167-6857

PB Kluwer Academic Publishers

DT Journal

LA English

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:161473 CAPLUS

DN 132:190490

TI Transgene assay using stable **Agrobacterium rhizogenes**  
transformation of plant roots

IN Taylor, Christopher G.; Huang, Yong

PA Monsanto Co., USA

SO PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000012735	A2	20000309	WO 1999-US19745	19990831
	WO 2000012735	A3	20010531		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2341324	AA	20000309	CA 1999-2341324	19990831
	AU 9962408	A1	20000321	AU 1999-62408	19990831
	EP 1119631	A2	20010801	EP 1999-949562	19990831
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	BR 9913651	A	20010925	BR 1999-13651	19990831
	JP 2002524056	T2	20020806	JP 2000-567721	19990831
PRAI	US 1998-98402P	P	19980831		
	WO 1999-US19745	W	19990831		

L8 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

AN 2000:203068 CAPLUS

DN 133:28497

TI How **Agrobacterium rhizogenes** triggers de novo root

formation in a recalcitrant woody plant: an integrated histological, ultrastructural and molecular analysis

AU Falasca, Giuseppina; Reverberi, Massimo; Lauri, Paola; Caboni, Emilia; De Stradis, Angelo; Altamura, Maria Maddalena  
CS Dipartimento di Biologia Vegetale, Universita di Roma 'La Sapienza', Rome, I-00185, Italy  
SO New Phytologist (2000), 145(1), 77-93  
CODEN: NEPHAV; ISSN: 0028-646X  
PB Cambridge University Press  
DT Journal  
LA English  
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3  
AN 1998:173681 CAPLUS  
DN 128:290944  
TI A putative rolB gene homolog of the **Agrobacterium rhizogenes** TR-DNA has different morphogenetic activity in tobacco than rolB  
AU Lemcke, Kai; Schmulling, Thomas  
CS Allgemeine Genetik, Universitat Tubingen, Tubingen, 72076, Germany  
SO Plant Molecular Biology (1998), 36(5), 803-808  
CODEN: PMBIDB; ISSN: 0167-4412  
PB Kluwer Academic Publishers  
DT Journal  
LA English  
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4  
AN 1997:468903 CAPLUS  
DN 127:186302  
TI The **Agrobacterium rhizogenes** rolB and rolC promoters are expressed in pericycle cells competent to serve as root initials in transgenic hybrid aspen  
AU Nilsson, Ove; Tuominen, Hannele; Sundberg, Bjorn; Olsson, Olof  
CS The Salk Institute for Biological Studies, La Jolla, CA, 92037, USA  
SO Physiologia Plantarum (1997), 100(3), 456-462  
CODEN: PHPLAI; ISSN: 0031-9317  
PB Munksgaard  
DT Journal  
LA English  
RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5  
AN 1996:149144 CAPLUS  
DN 124:222580  
TI Tissue-specific expression of the rolA gene mediates morphological changes in transgenic tobacco  
AU Guivarc'h, Anne; Carneiro, Mauro; Vilaine, Francoise; Pautot, Veronique; Chriqui, Dominique  
CS Lab. CEMV, Universite Pierre et Marie Curie, Paris, F-75252, Fr.  
SO Plant Molecular Biology (1996), 30(1), 125-34  
CODEN: PMBIDB; ISSN: 0167-4412  
PB Kluwer  
DT Journal  
LA English

L8 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1995:945358 CAPLUS



DN 124:46826  
 TI Evaluation in tobacco of the organ specificity and strength of the rolD promoter, domain A of the 35S promoter and the 35S2 promoter  
 AU Elmayan, Taline; Tepfer, Mark  
 CS Laboratoire de Biologie Cellulaire, INRA, Versailles, 78026, Fr.  
 SO Transgenic Research (1995), 4(6), 388-96  
 CODEN: TRSEES; ISSN: 0962-8819  
 PB Chapman & Hall  
 DT Journal  
 LA English

L8 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6  
 AN 1995:888603 CAPLUS  
 DN 123:310647  
 TI Genetic transformation of *Verticordia grandis* (Myrtaceae) using wild-type **Agrobacterium rhizogenes** and binary *Agrobacterium* vectors.  
 AU Stummer, B. E.; Smith, S. E.; Langridge, P.  
 CS Department of Plant Science, Faculty of Agricultural and Natural Resource Sciences, Waite Agricultural Research Institute, Adelaide University, Adelaide, South Australia, Australia  
 SO Plant Science (Shannon, Ireland) (1995), 111(1), 51-62  
 CODEN: PLSCE4; ISSN: 0168-9452  
 PB Elsevier  
 DT Journal  
 LA English

L8 ANSWER 9 OF 19 CABA COPYRIGHT 2004 CABI on STN  
 AN 94:103633 CABA  
 DN 19941608828  
 TI Histochemical localization of a **chimeric** gene (rolC-GUS) expression in zygotic embryos of transgenic tobacco plants  
 AU Aspuria, E. T.; Nagato, Y.; Uchimiya, H.  
 CS Institute of Molecular & Cellular Biosciences, Faculty of Agriculture, University of Tokyo, Yayoi, Bunkyo-ku, Tokyo 113, Japan.  
 SO Annals of Botany, (1994) Vol. 73, No. 5, pp. 465-469. 25 ref.  
 ISSN: 0305-7364  
 DT Journal  
 LA English  
 ED Entered STN: 19941101  
 Last Updated on STN: 19941101

L8 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 7  
 AN 1993:401939 CAPLUS  
 DN 119:1939  
 TI Promotion of flowering and morphological alterations in *Atropa belladonna* transformed with a CaMV 35S-rolC **chimeric** gene of the Ri plasmid  
 AU Kurioka, Yuriko; Suzuki, Yoshihito; Kamada, Hiroshi; Harada, Hiroshi  
 CS Gene Exp. Cent., Univ. Tsukuba, Tsukuba, 305, Japan  
 SO Plant Cell Reports (1992), 12(1), 1-6  
 CODEN: PCRPD8; ISSN: 0721-7714  
 DT Journal  
 LA English

L8 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1991:529090 CAPLUS  
 DN 115:129090  
 TI Transformation by **Agrobacterium rhizogenes** and regeneration of transgenic shoots of the wild soybean *Glycine argyrea*  
 AU Kumar, V.; Jones, B.; Davey, M. R.  
 CS Dep. Bot., Univ. Nottingham, Nottingham, NG7 2RD, UK  
 SO Plant Cell Reports (1991), 10(3), 135-8

CODEN: PCRPD8; ISSN: 0721-7714

DT Journal  
LA English

L8 ANSWER 12 OF 19 CABA COPYRIGHT 2004 CABI on STN  
AN 91:43687 CABA  
DN 19911620474  
TI Use of **Agrobacterium rhizogenes** to create  
**chimeric** apple trees through genetic grafting  
AU Lambert, C.; Tepfer, D.  
CS Laboratoire de Biologie Vegetale, Faculte des Sciences, 49035 Angers,  
France.  
SO Bio/Technology, (1991) Vol. 9, No. 1, pp. 80-83. 31 ref.  
ISSN: 0733-222X  
DT Journal  
LA English  
ED Entered STN: 19941101  
Last Updated on STN: 19941101

L8 ANSWER 13 OF 19 AGRICOLA Compiled and distributed by the National  
Agricultural Library of the Department of Agriculture of the United States  
of America. It contains copyrighted materials. All rights reserved.  
(2004) on STN  
AN 91:43017 AGRICOLA  
DN IND91014069  
TI Functional analysis of the Sesbania rostrata leghemoglobin glb3 gene 5'  
-upstream region in transgenic Lotus corniculatus and Nicotiana tabacum  
plants.  
AU Szabados, L.; Ratet, P.; Grunenberg, B.; De Bruijn, F.J.  
CS Biological Research Center Institute of Plant Physiology, Szeged, Hungary  
AV DNAL (QK725.P532)  
SO The Plant cell, Oct 1990. Vol. 10, No. 2. p. 973-986 ill  
Publisher: Rockville, Md. : American Society of Plant Physiologists.  
ISSN: 1040-4651  
NTE Includes references.  
DT Article  
FS U.S. Imprints not USDA, Experiment or Extension  
LA English

L8 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8  
AN 1990:31568 CAPLUS  
DN 112:31568  
TI Use of a disarmed Ri plasmid vector in the analysis of transformed root  
induction  
AU McInnes, E.; Davey, M. R.; Mulligan, B. J.; Davies, K.; Sargent, A. W.;  
Morgan, A. J.  
CS Dep. Bot., Univ. Nottingham, Nottingham, NG7 2RD, UK  
SO Journal of Experimental Botany (1989), 40(219), 1135-44  
CODEN: JEBOA6; ISSN: 0022-0957  
DT Journal  
LA English

L8 ANSWER 15 OF 19 AGRICOLA Compiled and distributed by the National  
Agricultural Library of the Department of Agriculture of the United States  
of America. It contains copyrighted materials. All rights reserved.  
(2004) on STN  
AN 91:43033 AGRICOLA  
DN IND91014085  
TI Promoters of the rolA, B, and C genes of **Agrobacterium**  
**rhizogenes** are differentially regulated in transgenic plants.  
AU Schmulling, T.; Schell, J.; Spena, A.  
CS Max-Planck-Institut fur Zuchtungsforchung, Koln, Federal Republic of

Germany  
 AV DNAL (QK725.P532)  
 SO The Plant cell, July 1989. Vol. 1, No. 7. p. 665-670 ill  
 Publisher: Rockville, Md. : American Society of Plant Physiologists.  
 ISSN: 1040-4651  
 NTE Includes references.  
 DT Article  
 FS U.S. Imprints not USDA, Experiment or Extension  
 LA English

L8 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 9  
 AN 1989:491664 CAPLUS  
 DN 111:91664  
 TI Expression of a **chimeric** kanamycin resistance gene introduced  
 into the wild soybean Glycine canescens using a cointegrate Ri plasmid  
 vector  
 AU Rech, E. L.; Golds, T. J.; Husnain, T.; Vainstein, M. H.; Jones, B.;  
 Hammatt, N.; Mulligan, B. J.; Davey, M. R.  
 CS Dep. Bot., Univ. Nottingham, Nottingham, NG7 2RD, UK  
 SO Plant Cell Reports (1989), 8(1), 33-6  
 CODEN: PCRPD8; ISSN: 0721-7714  
 DT Journal  
 LA English

L8 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1989:226619 CAPLUS  
 DN 110:226619  
 TI Method for nutritional improvement of plants by introduction of  
 Bertholletia excelsa sulfur-rich 2 S seed storage protein gene  
 IN Sun, Samuel S. M.; Altenbach, Susan B.  
 PA Plant Cell Research Institute, Inc., USA  
 SO Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 295959	A2	19881221	EP 1988-305580	19880617
	EP 295959	A3	19900110		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AU	8818100	A1	19881222	AU 1988-18100	19880617
AU	624329	B2	19920611		
JP	01091787	A2	19890411	JP 1988-152101	19880620
PRAI	US 1987-65303		19870619		

L8 ANSWER 18 OF 19 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on  
 STN  
 AN 1997:344164 BIOSIS  
 DN PREV199799643367  
 TI Morphological changes in transgenic Populus carrying the RolC gene from  
**Agrobacterium rhizogenes**.  
 AU Fladung, M. [Reprint author]; Muhs, H.-J.; Ahuja, M. R.  
 CS Federal Res. Centre Forestry Forest Products, Inst. Forest Genetics,  
 Sieker Landstr. 2, D-22927 Grosshansdorf, Germany  
 SO Silvae Genetica, (1996 (1997)) Vol. 45, No. 5-6, pp. 349-354. .  
 CODEN: SIGEAQ. ISSN: 0037-5349.  
 DT Article  
 LA English  
 ED Entered STN: 11 Aug 1997  
 Last Updated on STN: 11 Aug 1997

L8 ANSWER 19 OF 19 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN

AN 2004:13372 AGRICOLA

DN IND43618977

TI The use of **Agrobacterium rhizogenes** transformed roots to obtain transgenic shoots of the apple rootstock Jork 9.

AU Pawlicki-Jullian, N.; Sedira, M.; Welander, M.

AV DNAL (QK725.P53)

SO Plant cell, tissue and organ culture, p. 163-171  
ISSN: 0167-6857

NTE In the special issue: Adventitious regeneration / edited by T. Geier, M.B. Schroeder and G.J.M. de Klerk.  
Includes references

DT Article

FS Non US

LA English

=> d his

(FILE 'HOME' ENTERED AT 19:07:50 ON 24 SEP 2004)

FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 19:08:20 ON 24 SEP 2004

L1 5289 S AGROBACTERIUM RHIZOGENES

L2 385616 S STEM OR HYPOCOTYL AND L1

L3 649 S (STEM OR HYPOCOTYL) AND L1

L4 30 S K599

L5 26 S L1 AND L4

L6 14 DUP REM L5 (12 DUPLICATES REMOVED)

L7 34 S (CHIMERA OR CHIMERIC) AND L3

L8 19 DUP REM L7 (15 DUPLICATES REMOVED)

=> d l8 1-19 ibib

L8 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2002:533523 CAPLUS

DOCUMENT NUMBER: 137:335211

TITLE: The use of **Agrobacterium rhizogenes** transformed roots to obtain transgenic shoots of the apple rootstock Jork 9

AUTHOR(S): Pawlicki-Jullian, Nathalie; Sedira, Monika; Welander, Margareta

CORPORATE SOURCE: IUT Genie Biologique, Amiens, F-80025, Fr.

SOURCE: Plant Cell, Tissue and Organ Culture (2002), 70(2), 163-171  
CODEN: PTCEDJ; ISSN: 0167-6857

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:161473 CAPLUS

DOCUMENT NUMBER: 132:190490

TITLE: Transgene assay using stable **Agrobacterium rhizogenes** transformation of plant roots

INVENTOR(S): Taylor, Christopher G.; Huang, Yong

PATENT ASSIGNEE(S): Monsanto Co., USA

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000012735	A2	20000309	WO 1999-US19745	19990831
WO 2000012735	A3	20010531		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG CA 2341324 AA 20000309 CA 1999-2341324 19990831 AU 9962408 A1 20000321 AU 1999-62408 19990831 EP 1119631 A2 20010801 EP 1999-949562 19990831 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO BR 9913651 A 20010925 BR 1999-13651 19990831 JP 2002524056 T2 20020806 JP 2000-567721 19990831 PRIORITY APPLN. INFO.: US 1998-98402P P 19980831 WO 1999-US19745 W 19990831				

L8 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2  
 ACCESSION NUMBER: 2000:203068 CAPLUS  
 DOCUMENT NUMBER: 133:28497  
 TITLE: How **Agrobacterium rhizogenes** triggers de novo root formation in a recalcitrant woody plant: an integrated histological, ultrastructural and molecular analysis  
 AUTHOR(S): Falasca, Giuseppina; Reverberi, Massimo; Lauri, Paola; Caboni, Emilia; De Stradis, Angelo; Altamura, Maria Maddalena  
 CORPORATE SOURCE: Dipartimento di Biologia Vegetale, Universita di Roma 'La Sapienza', Rome, I-00185, Italy  
 SOURCE: New Phytologist (2000), 145(1), 77-93  
 CODEN: NEPHAV; ISSN: 0028-646X  
 PUBLISHER: Cambridge University Press  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3  
 ACCESSION NUMBER: 1998:173681 CAPLUS  
 DOCUMENT NUMBER: 128:290944  
 TITLE: A putative rolB gene homolog of the **Agrobacterium rhizogenes** TR-DNA has different morphogenetic activity in tobacco than rolB  
 AUTHOR(S): Lemcke, Kai; Schmulting, Thomas  
 CORPORATE SOURCE: Allgemeine Genetik, Universitat Tübingen, Tübingen, 72076, Germany  
 SOURCE: Plant Molecular Biology (1998), 36(5), 803-808  
 CODEN: PMBIDB; ISSN: 0167-4412  
 PUBLISHER: Kluwer Academic Publishers  
 DOCUMENT TYPE: Journal

LANGUAGE: English  
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4  
ACCESSION NUMBER: 1997:468903 CAPLUS  
DOCUMENT NUMBER: 127:186302  
TITLE: The **Agrobacterium rhizogenes** rolB  
and rolC promoters are expressed in pericycle cells  
competent to serve as root initials in transgenic  
hybrid aspen  
AUTHOR(S): Nilsson, Ove; Tuominen, Hannele; Sundberg, Bjorn;  
Olsson, Olof  
CORPORATE SOURCE: The Salk Institute for Biological Studies, La Jolla,  
CA, 92037, USA  
SOURCE: Physiologia Plantarum (1997), 100(3), 456-462  
CODEN: PHPLAI; ISSN: 0031-9317  
PUBLISHER: Munksgaard  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5  
ACCESSION NUMBER: 1996:149144 CAPLUS  
DOCUMENT NUMBER: 124:222580  
TITLE: Tissue-specific expression of the rolA gene mediates  
morphological changes in transgenic tobacco  
AUTHOR(S): Guivarc'h, Anne; Carneiro, Mauro; Vilaine, Françoise;  
Pautot, Veronique; Chriqui, Dominique  
CORPORATE SOURCE: Lab. CEMV, Universite Pierre et Marie Curie, Paris,  
F-75252, Fr.  
SOURCE: Plant Molecular Biology (1996), 30(1), 125-34  
CODEN: PMBIDB; ISSN: 0167-4412  
PUBLISHER: Kluwer  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L8 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1995:945358 CAPLUS  
DOCUMENT NUMBER: 124:46826  
TITLE: Evaluation in tobacco of the organ specificity and  
strength of the rold promoter, domain A of the 35S  
promoter and the 35S2 promoter  
AUTHOR(S): Elmayer, Taline; Tepfer, Mark  
CORPORATE SOURCE: Laboratoire de Biologie Cellulaire, INRA, Versailles,  
78026, Fr.  
SOURCE: Transgenic Research (1995), 4(6), 388-96  
CODEN: TRSEES; ISSN: 0962-8819  
PUBLISHER: Chapman & Hall  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L8 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6  
ACCESSION NUMBER: 1995:888603 CAPLUS  
DOCUMENT NUMBER: 123:310647  
TITLE: Genetic transformation of *Verticordia grandis*  
(Myrtaceae) using wild-type **Agrobacterium**  
**rhizogenes** and binary *Agrobacterium* vectors.  
AUTHOR(S): Stummer, B. E.; Smith, S. E.; Langridge, P.  
CORPORATE SOURCE: Department of Plant Science, Faculty of Agricultural  
and Natural Resource Sciences, Waite Agricultural

Research Institute, Adelaide University, Adelaide,  
South Australia, Australia  
SOURCE: Plant Science (Shannon, Ireland) (1995), 111(1), 51-62  
CODEN: PLSCE4; ISSN: 0168-9452  
PUBLISHER: Elsevier  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L8 ANSWER 9 OF 19 CABA COPYRIGHT 2004 CABI on STN

ACCESSION NUMBER: 94:103633 CABA  
DOCUMENT NUMBER: 19941608828  
TITLE: Histochemical localization of a **chimeric**  
gene (rolC-GUS) expression in zygotic embryos of  
transgenic tobacco plants  
AUTHOR: Aspuria, E. T.; Nagato, Y.; Uchimiya, H.  
CORPORATE SOURCE: Institute of Molecular & Cellular Biosciences,  
Faculty of Agriculture, University of Tokyo, Yayoi,  
Bunkyo-ku, Tokyo 113, Japan.  
SOURCE: Annals of Botany, (1994) Vol. 73, No. 5, pp.  
465-469. 25 ref.  
ISSN: 0305-7364  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ENTRY DATE: Entered STN: 19941101  
Last Updated on STN: 19941101

L8 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 7

ACCESSION NUMBER: 1993:401939 CAPLUS  
DOCUMENT NUMBER: 119:1939  
TITLE: Promotion of flowering and morphological alterations  
in Atropa belladonna transformed with a CaMV 35S-rolC  
**chimeric** gene of the Ri plasmid  
AUTHOR(S): Kurioka, Yuriko; Suzuki, Yoshihito; Kamada, Hiroshi;  
Harada, Hiroshi  
CORPORATE SOURCE: Gene Exp. Cent., Univ. Tsukuba, Tsukuba, 305, Japan  
SOURCE: Plant Cell Reports (1992), 12(1), 1-6  
CODEN: PCRPD8; ISSN: 0721-7714  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L8 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1991:529090 CAPLUS  
DOCUMENT NUMBER: 115:129090  
TITLE: Transformation by **Agrobacterium**  
**rhizogenes** and regeneration of transgenic  
shoots of the wild soybean Glycine argyrea  
AUTHOR(S): Kumar, V.; Jones, B.; Davey, M. R.  
CORPORATE SOURCE: Dep. Bot., Univ. Nottingham, Nottingham, NG7 2RD, UK  
SOURCE: Plant Cell Reports (1991), 10(3), 135-8  
CODEN: PCRPD8; ISSN: 0721-7714  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L8 ANSWER 12 OF 19 CABA COPYRIGHT 2004 CABI on STN

ACCESSION NUMBER: 91:43687 CABA  
DOCUMENT NUMBER: 19911620474  
TITLE: Use of **Agrobacterium rhizogenes**  
to create **chimeric** apple trees through  
genetic grafting  
AUTHOR: Lambert, C.; Tepfer, D.  
CORPORATE SOURCE: Laboratoire de Biologie Vegetale, Faculte des  
Sciences, 49035 Angers, France.

SOURCE: Bio/Technology, (1991) Vol. 9, No. 1, pp. 80-83. 31  
ref.  
ISSN: 0733-222X  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ENTRY DATE: Entered STN: 19941101  
Last Updated on STN: 19941101

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ACCESSION NUMBER: 91:43017 AGRICOLA  
DOCUMENT NUMBER: IND91014069  
TITLE: Functional analysis of the Sesbania rostrata  
leghemoglobin glb3 gene 5' -upstream region in  
transgenic Lotus corniculatus and Nicotiana tabacum  
plants.  
AUTHOR(S): Szabados, L.; Ratet, P.; Grunenbergs, B.; De Bruijn,  
F.J.  
CORPORATE SOURCE: Biological Research Center Institute of Plant  
Physiology, Szeged, Hungary  
AVAILABILITY: DNAL (QK725.P532)  
SOURCE: The Plant cell, Oct 1990. Vol. 10, No. 2. p. 973-986  
ill  
Publisher: Rockville, Md. : American Society of Plant  
Physiologists.  
ISSN: 1040-4651  
NOTE: Includes references.  
DOCUMENT TYPE: Article  
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension  
LANGUAGE: English

L8 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8

ACCESSION NUMBER: 1990:31568 CAPLUS  
DOCUMENT NUMBER: 112:31568  
TITLE: Use of a disarmed Ri plasmid vector in the analysis of  
transformed root induction  
AUTHOR(S): McInnes, E.; Davey, M. R.; Mulligan, B. J.; Davies,  
K.; Sargent, A. W.; Morgan, A. J.  
CORPORATE SOURCE: Dep. Bot., Univ. Nottingham, Nottingham, NG7 2RD, UK  
SOURCE: Journal of Experimental Botany (1989), 40(219),  
1135-44  
CODEN: JEBOA6; ISSN: 0022-0957  
DOCUMENT TYPE: Journal  
LANGUAGE: English

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ACCESSION NUMBER: 91:43033 AGRICOLA  
DOCUMENT NUMBER: IND91014085  
TITLE: Promoters of the rolA, B, and C genes of  
**Agrobacterium rhizogenes** are  
differentially regulated in transgenic plants.  
AUTHOR(S): Schmulling, T.; Schell, J.; Spena, A.  
CORPORATE SOURCE: Max-Planck-Institut fur Zuchtungsforschung, Koln,  
Federal Republic of Germany  
AVAILABILITY: DNAL (QK725.P532)  
SOURCE: The Plant cell, July 1989. Vol. 1, No. 7. p. 665-670  
ill



Publisher: Rockville, Md. : American Society of Plant  
Physiologists.  
ISSN: 1040-4651

NOTE: Includes references.  
DOCUMENT TYPE: Article  
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension  
LANGUAGE: English

L8 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 9

ACCESSION NUMBER: 1989:491664 CAPLUS  
DOCUMENT NUMBER: 111:91664  
TITLE: Expression of a **chimeric** kanamycin  
resistance gene introduced into the wild soybean  
Glycine canescens using a cointegrate Ri plasmid  
vector  
AUTHOR(S): Rech, E. L.; Golds, T. J.; Husnain, T.; Vainstein, M.  
H.; Jones, B.; Hammatt, N.; Mulligan, B. J.; Davey, M.  
R.  
CORPORATE SOURCE: Dep. Bot., Univ. Nottingham, Nottingham, NG7 2RD, UK  
SOURCE: Plant Cell Reports (1989), 8(1), 33-6  
CODEN: PCRPD8; ISSN: 0721-7714  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L8 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:226619 CAPLUS  
DOCUMENT NUMBER: 110:226619  
TITLE: Method for nutritional improvement of plants by  
introduction of Bertholletia excelsa sulfur-rich 2 S  
seed storage protein gene  
INVENTOR(S): Sun, Samuel S. M.; Altenbach, Susan B.  
PATENT ASSIGNEE(S): Plant Cell Research Institute, Inc., USA  
SOURCE: Eur. Pat. Appl., 11 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 295959	A2	19881221	EP 1988-305580	19880617
EP 295959	A3	19900110		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AU 8818100	A1	19881222	AU 1988-18100	19880617
AU 624329	B2	19920611		
JP 01091787	A2	19890411	JP 1988-152101	19880620
PRIORITY APPLN. INFO.:			US 1987-65303	19870619

L8 ANSWER 18 OF 19 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on  
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ACCESSION NUMBER: 1997:344164 BIOSIS  
DOCUMENT NUMBER: PREV199799643367  
TITLE: Morphological changes in transgenic Populus carrying the  
RolC gene from **Agrobacterium rhizogenes**  
AUTHOR(S): Fladung, M. [Reprint author]; Muhs, H.-J.; Ahuja, M. R.  
CORPORATE SOURCE: Federal Res. Centre Forestry Forest Products, Inst. Forest  
Genetics, Sieker Landstr. 2, D-22927 Grosshansdorf, Germany  
SOURCE: Silvae Genetica, (1996 (1997)) Vol. 45, No. 5-6, pp.  
349-354.  
CODEN: SIGEAQ. ISSN: 0037-5349.

DOCUMENT TYPE: Article  
LANGUAGE: English  
ENTRY DATE: Entered STN: 11 Aug 1997  
Last Updated on STN: 11 Aug 1997

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ACCESSION NUMBER: 2004:13372 AGRICOLA  
DOCUMENT NUMBER: IND43618977  
TITLE: The use of **Agrobacterium rhizogenes**  
transformed roots to obtain transgenic shoots of the  
apple rootstock Jork 9.  
AUTHOR(S): Pawlicki-Jullian, N.; Sedira, M.; Welander, M.  
AVAILABILITY: DNAL (QK725.P53)  
SOURCE: Plant cell, tissue and organ culture, p. 163-171  
ISSN: 0167-6857  
NOTE: In the special issue: Adventitious regeneration /  
edited by T. Geier, M.B. Schroeder and G.J.M. de  
Klerk.  
Includes references  
DOCUMENT TYPE: Article  
FILE SEGMENT: Non US  
LANGUAGE: English

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(FILE 'HOME' ENTERED AT 19:07:50 ON 24 SEP 2004)

FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 19:08:20 ON 24 SEP 2004

L1 5289 S AGROBACTERIUM RHIZOGENES  
L2 385616 S STEM OR HYPOCOTYL AND L1  
L3 649 S (STEM OR HYPOCOTYL) AND L1  
L4 30 S K599  
L5 26 S L1 AND L4  
L6 14 DUP REM L5 (12 DUPLICATES REMOVED)  
L7 34 S (CHIMERA OR CHIMERIC) AND L3  
L8 19 DUP REM L7 (15 DUPLICATES REMOVED)

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L8 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1  
AB The apple rootstock Jork 9 was transformed using four different  
**Agrobacterium rhizogenes** virulent strains. The  
mannopine strain 8196 gave the best results in the production of  
**chimeric** plants compared to two agropine strains (A4 and 15834)  
and one cucumopine strain. Shoot regeneration was performed on both  
untransformed and transformed roots. Optimum combination and concentration of  
thidiazuron (TDZ) and  $\alpha$ -naphthaleneacetic acid (NAA) was different  
between untransformed and transformed roots. From the transformed roots  
seven shoots were obtained and propagated as individual clones. All  
shoots from these clones rooted on a hormone-free medium contrary to  
untransformed shoots that did not root under similar culture conditions.  
Differences in the morphol. of the leaves and **stems** were observed  
between the clones. The transformed status of the different clones was  
verified with mannopine tests, PCR and Southern blot analyses. Five  
clones contained the mas1', the ORF 13 and the rolB genes, whereas two  
clones contained only the rolB gene.

L8 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

AB A novel method is described for the screening of gene elements of interest using hairy roots of **chimeric** plants transformed with **Agrobacterium rhizogenes**. The method comprises obtaining an explant, inoculating the explant with A. rhizogenes strain K599 containing an exogenous genetic element capable of being transferred to the explant, culturing the inoculated explant in a manner permitting transgenic root development, and producing a stable **chimeric** plant with transgenic root tissue. This transgenic root tissue is available for testing of the functionality of the genetic element introduced therein by standard methodol. relevant to the genetic element being tested. Thus one can quickly and cheaply screen for a genetic element using this method of generating transgenic hairy roots. The method is exemplified by transformation of soybean and potato with kanamycin as the selectable agent.

L8 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

AB Adventitious rooting might be induced in recalcitrant woody genotypes by infection with **Agrobacterium rhizogenes**, and, in some cases, might also require exogenous auxin. The objective of the present study was to determine how agrobacteria trigger root formation in the **stem** of a recalcitrant woody microcutting, which cytol. events result from the combined presence of infection and exogenous auxin, and which types of roots are induced by infection. Microcuttings of a recalcitrant walnut (*Juglans regia*), infected or not with A. rhizogenes strain 1855, were cultured with either indolebutyric acid (IBA), IAA, or without exogenous hormones, to induce rhizogenesis. They were cytohistol. and ultrastructurally investigated at various times in culture. Southern blot and PCR analyses were performed to verify the frequency of transgenic, **chimeric** and bacterium-containing roots. The infection was sufficient per se to stimulate rhizogenesis. Rooting on the infected cuttings was enhanced by exogenous IBA, which accelerated and increased root meristemoid formation, in comparison with without-hormone treatment. Meristemoids were organized both directly by the cambial cells and indirectly by the callus, and showed a pluricellular origin. Inter and intracellular bacteria were observed in the **stem** throughout the culture period (30 days). They were preferentially present in the vessels, and mainly in those showing polyphenol deposition. In the infected IAA-treated cultures, a high level of secondary xylem formation occurred instead of rhizogenesis. Nontransformed roots were preferentially produced by the infected cuttings treated with the auxins. Bacterium-containing and **chimeric** roots were produced by infected cuttings independently of the treatment. Thus, in a recalcitrant walnut, nontransformed root meristemoids are stimulated by combining infection and exogenous indolebutyric acid. Furthermore, the persistence of bacteria in the **stem** during the culture and the pluricellular origin of the meristemoids explain the presence of the bacterium-containing and **chimeric** roots.

L8 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

AB **Agrobacterium rhizogenes** strains of the agropine type harbor on their Ri-plasmid two T-DNAs, a left TL-DNA and a right TR-DNA. The rolB gene of the TL-DNA is the major factor in the pathogenesis of the hairy-root disease and its constitutive expression interferes profoundly with plant morphogenesis. The authors have tested whether the expression of its sequence related putative homolog from the TR-DNA (rolBTR) may cause also bacterial virulence or affect plant development. Unlike rolB, rolBTR is unable to induce root formation on tobacco leaf disks. Tobacco plants expressing a **chimeric** 35S::rolTR gene have reduced stature, off-shoots at the **stem** base and bent and wrinkled leaves with epinastic growth. 14 N-terminal amino acids which are absent in the rolB protein are indispensable to rolBTR protein activity. The characteristic tyrosine phosphatase super family motif CX5R is absent in

the rolBTR protein. For rolB this motif is possibly functionally relevant. It is concluded that the rolBTR gene product has morphogenic activity but is not a functional homolog of the rolB protein.

L8 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4

AB Expression of the **Agrobacterium rhizogenes** rolB and rolC promoters was studied in transgenic hybrid aspen (*Populus tremula* + *P. tremuloides*) lines containing a **chimeric** fusion of either the rolB or the rolC promoter and the reporter gene uidA. The resultant GUS activity was monitored by histochem. anal. in aerial tissues as well as in developing roots. Both the rolC and rolB promoters were expressed in the phloem and in the root tips, which is similar to the expression pattern previously described for annual plants. However, a strong expression of the rolB promoter in the rays of the phloem and the cambial zone of the **stem**, and of the rolC promoter in groups of pericycle cells prior to and during lateral root initiation was unique for hybrid aspen. In both **stem** and root tissues, the expression of the rolB and rolC promoters was localized primarily in a subset of cells competent to form adventitious or lateral roots, suggesting that these cells might serve as the target for *A. rhizogenes* infection. The biol. significance of the cell-specific rol gene expression in establishing the hairy root disease is discussed.

L8 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5

AB The spatial and temporal activity of the entire and individual promoter domains of the rolA gene of **Agrobacterium rhizogenes** was investigated and correlated with the distinctive features of the phenotypes of transgenic tobacco plants. The GUS assay was performed in the presence of an oxidative catalyst during the development of transgenic plants expressing **chimeric** genes containing the  $\beta$ -glucuronidase coding sequence under the control of the different promoter domains. In situ hybridization was also used on transgenic plants harboring rolA under the control of the entire or deleted promoter. This paper demonstrates for the first time that the entire rolA promoter, composed of domains, A, B and C, is silent in seeds, then activated at the onset of germination in the cotyledons and in the elongation zone of the radicle and is finally expressed throughout the vegetative and floral phases. Domains B+C, which were sufficient to induce wrinkled leaves and short internodes, were active in all the **stem** tissues, but only in the companion cells of the phloem strands of the leaves. Domain C, which specified a dwarf phenotype with normal leaves, was weakly expressed in the **stem** vascular bundles and in the leaf internal phloem. These results indicate that the vascular bundles are the primary targets for the generation of the short internode phenotype. Furthermore, the local expression of rolA in the **stem** vascular bundles induced a size reduction of the surrounding parenchyma cells, suggesting the existence of some diffusible factor(s) associated with the expression of the rolA gene.

L8 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

AB In order to study the expression in plants of the rolD promoter of **Agrobacterium rhizogenes**, we have constructed **chimeric** genes placing the coding region of the gusA (uidA) marker gene under control of two rolD promoter fragments of different length. Similar results were obtained with both genes. Expression studies were carried out in transformed R1 progeny plants. In mature transformed tobacco plants, the rolD-gus genes were expressed strongly in roots, and to much lower levels in **stems** and leaves. This pattern of expression was transmitted to progeny, though the ratio of the level of expression in roots relative to that in leaves was much lower in young seedlings. The degree of root specificity in rolD-gus transformants was less than that of a gene constructed with domain A of the CaMV 35S promoter with doubled domain B, 35S2-gus. The rolD-gus genes had a

distinctive pattern of expression in roots, compared to that of the two other genes, with the strongest GUS activity observed in the root elongation zone and in vascular tissue, and much less in the root apex.

L8 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6

AB The susceptibility of *V. grandis* to **Agrobacterium rhizogenes** was shown by simultaneous wounding and inoculation of the **stems** of shoot explants with 4 wild-type strains of *A. rhizogenes*. Shoots inoculated with 3 of the 4 strains developed abnormal tissues containing the opine (agropine or mannopine) characteristic of the bacterial strain used. A regeneration system for *V. grandis* was developed, using leaf disks excised from the petiole region of micropropagated shoots. These disks were used for transformation studies using two plasmid vectors in either the wild-type *A. rhizogenes* strains or a non-oncogenic *A. tumefaciens* strain, LBA4404. The plasmid vectors (pBI121 and pKiwi) contained **chimeric** kanamycin resistance genes, neomycin phosphotransferase II (NPTII) and the bacterial  $\beta$ -glucuronidase (GUS) uidA gene. Leaf disks were inoculated by wounding and selected for growth on kanamycin-containing medium. Regenerated shoots were transferred to root induction medium containing kanamycin and those plants which produced roots were regarded as potential transformants. These plants were assayed for GUS activity and transformation was confirmed by Southern DNA hybridization and by PCR amplification of the GUS gene. These results represent the first report of transformation and subsequent regeneration of a plant from the economically important Myrtaceae.

L8 ANSWER 9 OF 19 CABA COPYRIGHT 2004 CABI on STN

AB Histochemical localization of the expression pattern of a construct consisting of the **Agrobacterium rhizogenes** rolC gene fused to a GUS reporter gene, by visualization of GUS activity, was analysed in developing embryos of transgenic tobacco plants. The results indicated that strong expression was localized mainly in the vascular cylinders of the cotyledons and central axis of the **hypocotyl**. Quantitative analysis indicated an increase of gene expression in embryos up to 20 days after pollination (DAP), but decreased at 30 DAP. Continuous increase of GUS activity was recorded up to 12 days after imbibition (DAI) in germinating seeds. The xylem cells were visualized following phloem differentiation in the cotyledons at 3 DAI.

L8 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 7

AB Kanamycin-resistant plants of belladonna (*A. belladonna*) were obtained after *Agrobacterium* mediated transformation. When a rolC gene, which is one of the loci located on Ri plasmid of **Agrobacterium rhizogenes**, was co-introduced with a kanamycin resistant (NPT II) gene under control of a cauliflower mosaic virus 35S promoter, the rolC gene was expressed strongly in leaves, flowers, **stems** and roots. The transformed plants exhibited dramatic promotion of flowering, reduced apical dominance, pale and lanceolated leaves and smaller flowers. On the other hand, when native rolC gene was co-introduced with NPT II, the transgenic plants obtained did not exhibit the altered phenotypes observed in 35S-rolC transformants, and the expression level of the rolC gene was much lower than in 35S-rolC transformants. These results suggest that the morphol. changes in transgenic *A. belladonna* were related to the degree of expression of the rolC gene.

L8 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

AB *G. argyrea* accession G1420 was evaluated for its response to inoculation with *A. rhizogenes* strains LBA9402 and A4T, carrying wild type Ri plasmids, and by strains R1601 and A4TIII with engineered plasmids. **Hypocotyls** from young seedlings were the most responsive in producing roots at inoculation sites. Root production was also dependent on

bacterial concentration Excised, cultured roots produced green nodular callus which regenerated shoots on SC2 medium containing 1.1 mg/L 6-benzylaminopurine and 0.005 mg/L indole-3-butyric acid. The transformed nature of the roots and of callus regenerating shoots was confirmed by the presence of opines and by dot blot anal. for Ri TL-DNA. Tissues regenerated from roots transformed by *A. rhizogenes* strains R1601 and A4TIII exhibited NPTII enzyme activity, confirming the stable integration and expression of the **chimeric** kanamycin resistance gene in transgenic tissues.

L8 ANSWER 12 OF 19 CABA COPYRIGHT 2004 CABI on STN

AB Rooting was induced in cut **stems** inoculated with *A. rhizogenes* in order to produce chimaeric plants with normal shoots but transformed roots. Mannopine was produced in the roots and translocated to the aerial parts. A single gene from the Ri TL-DNA (ORF 12 or rolC) was sufficient to produce root induction, suggesting that this gene could be permanently inserted into the genome of rootstock clones to improve rooting.

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AB Expression of the *Sesbania rostrata* leghemoglobin *glb3* gene was analyzed in transgenic *Lotus corniculatus* and tobacco plants harboring **chimeric** *glb3-uidA* (*gus*) gene fusions to identify cis-acting elements involved in nodule-specific gene expression and general transcriptional control. A 1.9-kilobase fragment of the *glb3* 5'-upstream region was found to direct a high level of nodule-specific beta-glucuronidase (GUS) activity in *L. corniculatus*, restricted to the *Rhizobium*-infected cells of the nodules. The same fragment directed a low level of GUS activity in tobacco, restricted primarily to the roots and to phloem cells of the **stem** and petiole vascular system. A deletion analysis revealed that the region between coordinates -429 and -48 relative to the ATG was sufficient for nodule-specific expression. Replacement of the -161 to -48 region, containing the *glb3* CAAT and TATA boxes, with the heterologous truncated promoters delta-p35S and delta-pnos resulted in a loss of nodule specificity and reduction of GUS activity in *L. corniculatus* but a significant increase in tobacco, primarily in the roots. The same fragment could not direct nodule-specific expression when fused to a heterologous enhancer in cis. This region contains DNA sequences required, but not sufficient, for nodule-specific expression in *L. corniculatus* that function poorly or may be involved in promoter silencing in tobacco. By fusing further upstream fragments to the delta-p35S and delta-pnos promoters, two positive regulatory regions were delimited between coordinates -1601 and -670, as well as -429 and -162. The former region appears to function as a general enhancer because it significantly increased promoter activity in both orientations in *L. corniculatus* and tobacco. The latter region could enhance gene expression in both orientations in tobacco, but only in the correct orientation in *L. corniculatus*. These results show that efficient expression of the *S. rostrata glb3* gene in nodules is mediated by an ATG-proximal, tissue-specific element, as well as further 5'-upstream positive elements; that the *S. rostrata glb3* promoter is induced in a nodule-specific fashion in the heterologous legume *L. corniculatus*, suggesting a high degree of conservation of the relevant regulatory signals; and that the *S. rostrata lb* promoter is not silent in the nonlegume tobacco, but is expressed primarily in the roots.

L8 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8

AB *Nicotiana glauca*, *N. tabacum*, *Solanum dulcamara* and *S. nigrum* were transformed by *Agrobacterium rhizogenes* strain BN1010 (TL-TR+). The TR-DNA stimulated agropine-pos. root induction and was transformation competent in the absence of the TL-DNA. An unusual pattern

of root induction was seen when **stem** explants were inoculated with this strain. Occasionally, agropine-pos. roots were induced at the inoculation sites, but prolific agropine-neg. roots were formed in profusion down the **stems**. The utility of BN1010 as an efficient co-integrating vector was demonstrated by the sep. transfer of a fragment containing rol ABC (BN1010::pEM15) and of a **chimeric** nopaline synthase-kanamycin resistance gene (BN1010::Neo) into plants. Root cultures of *S. dulcamara* transformed with BN1010::Neo had an unusual, pos. geotropic phenotype. Strain BN1010::pEM15 (rol ABC+D-TR+) incited more roots down **stem** explants than strain A4T. This indicates that rol D may act to suppress agropine-neg. root production in *N. glauca* and *N. tabacum*.

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AB **Chimeric** genes containing the beta-glucuronidase reporter gene under the control of the rolA, B, and C promoters of **Agrobacterium rhizogenes** are expressed in a regulated manner in transgenic plants. The intergenic region separating the rolB and C genes represents a bidirectional promoter. This bidirectional promoter regulates transcription for both genes in a similar fashion in aerial organs of the plants, but in a distinct way in roots. Moreover, both rolB and C promoter activities differ from those characteristic of the rolA promoter. Thus, promoters of bacterial origin show differential expression in transgenic plants, and regulation of rol gene expression plays a role in the biological effects caused by the rolA, B, and C genes.

L8 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 9

AB Seedling **hypocotyl** explants of *G. canescens* were inoculated with **Agrobacterium rhizogenes** carrying a **chimeric** neomycin phosphotransferase II (NPTII) gene cointegrated into the TL-DNA of pRiA4. Transformed roots produced shoots on B5-based medium with 10.0 mg/L 6-benzylaminopurine, 0.05 mg/L indole-butyric acid, and 50 µg/mL kanamycin. Cultured roots and regenerated plants expressed NPTII enzyme activity which was correlated with the presence of Ri TL-DNA and the structural sequence of the NPTII gene.

L8 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

AB A method is presented for improving the nutritive quality of higher plants by cloning into them an S-rich 2 S seed storage protein subunit gene from *B. excelsa* (Brazil nut). The gene is under the control of a heterologous promoter. A pARC12 derivative was constructed which contained the following: (1) the expression cassette in which the *B. excelsa* seed storage protein gene was linked to the phaseolin promoter and signal sequence; and (2) a **chimeric** nopaline synthase/neomycin phosphotransferase gene as a marker for transformed plant cells. This derivative was part of a binary Ti plasmid vector system of **Agrobacterium rhizogenes**. Bacteria containing both plasmids were inoculated into alfalfa **stem** segments, from which hairy roots were subsequently formed. These hairy roots were grown into calli and then regenerated into alfalfa plants which potentially carried the *B. excelsa* seed storage protein gene.

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AB We have employed the reporter gene rolC gene from **Agrobacterium rhizogenes** as a morphologically detectable marker system for investigating growth alterations in *Populus*. A hybrid aspen (*R. tremula* L. x *R. tremuloides* MICHX.) clone, Esch5, was transformed using different **chimeric** gene constructs including the rolC gene to study its effect on morphological and physiologically-conditioned parameters.

Mainly, transgenic aspen carrying the rolC gene under control of the cauliflower-mosaic-virus 35S-promoter and the light inducible rbcS promoter from potato were compared with controls. Other gene constructs, in which rolC expression is prevented by insertion of the transposable element Ac from maize were also included. Differences in growth parameters (e.g. plant height, **stem** diameter, number of leaves), and growth arrest and terminal bud formation were observed between the control and the 35S-rolC transgenic aspens. Evaluation of onset of dormancy in the autumn and flushing in the next spring revealed differences between untransformed controls and, in particular, the 35S-rolC transgenic plants. These tree-specific morphological and developmental characteristics are discussed in the light of the transferred foreign genes in aspen-Populus, a woody plant model system.

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AB The apple rootstock Jork 9 was transformed using four different **Agrobacterium rhizogenes** virulent strains. The mannopine strain 8196 gave the best results in the production of **chimeric** plants compared to two agropine strains (A4 and 15834) and one cucumopine strain. Shoot regeneration was performed on both untransformed and transformed roots. Optimum combination and concentration of thidiazuron (TDZ) and (alpha)-naphthaleneacetic acid (NAA) was different between untransformed and transformed roots. From the transformed roots seven shoots were obtained and propagated as individual clones. All shoots from these clones rooted on a hormone-free medium contrary to untransformed shoots that did not root under similar culture conditions. Differences in the morphology of the leaves and **stems** were observed between the clones. The transformed status of the different clones was verified with mannopine tests, PCR and Southern blot analyses. Five clones contained the mas1', the ORF 13 and the rolB genes, whereas two clones contained only the rolB gene.

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FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 19:08:20 ON 24 SEP 2004

L1 5289 S AGROBACTERIUM RHIZOGENES  
 L2 385616 S STEM OR HYPOCOTYL AND L1  
 L3 649 S (STEM OR HYPOCOTYL) AND L1  
 L4 30 S K599  
 L5 26 S L1 AND L4  
 L6 14 DUP REM L5 (12 DUPLICATES REMOVED)  
 L7 34 S (CHIMERA OR CHIMERIC) AND L3  
 L8 19 DUP REM L7 (15 DUPLICATES REMOVED)

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=> d 18 12

L8 ANSWER 12 OF 19 CABA COPYRIGHT 2004 CABI on STN

AN 91:43687 CABA

DN 19911620474

TI Use of **Agrobacterium rhizogenes** to create **chimeric** apple trees through genetic grafting

AU Lambert, C.; Tepfer, D.

CS Laboratoire de Biologie Vegetale, Faculte des Sciences, 49035 Angers, France.



SO Bio/Technology, (1991) Vol. 9, No. 1, pp. 80-83. 31 ref.  
ISSN: 0733-222X  
DT Journal  
LA English  
ED Entered STN: 19941101  
Last Updated on STN: 19941101

=> d his

(FILE 'HOME' ENTERED AT 19:07:50 ON 24 SEP 2004)

FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 19:08:20 ON 24 SEP 2004

L1 5289 S AGROBACTERIUM RHIZOGENES  
L2 385616 S STEM OR HYPOCOTYL AND L1  
L3 649 S (STEM OR HYPOCOTYL) AND L1  
L4 30 S K599  
L5 26 S L1 AND L4  
L6 14 DUP REM L5 (12 DUPLICATES REMOVED)  
L7 34 S (CHIMERA OR CHIMERIC) AND L3  
L8 19 DUP REM L7 (15 DUPLICATES REMOVED)

=> s (chimeric plant) and l3

L9 5 (CHIMERIC PLANT) AND L3

=> dup rem l9

PROCESSING COMPLETED FOR L9

L10 3 DUP REM L9 (2 DUPLICATES REMOVED)

=> d l10 1-3

L10 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1  
AN 2002:533523 CAPLUS  
DN 137:335211  
TI The use of **Agrobacterium rhizogenes** transformed roots  
to obtain transgenic shoots of the apple rootstock Jork 9  
AU Pawlicki-Jullian, Nathalie; Sedira, Monika; Welander, Margareta  
CS IUT Genie Biologique, Amiens, F-80025, Fr.  
SO Plant Cell, Tissue and Organ Culture (2002), 70(2), 163-171  
CODEN: PTCEDJ; ISSN: 0167-6857  
PB Kluwer Academic Publishers  
DT Journal  
LA English  
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:161473 CAPLUS  
DN 132:190490  
TI Transgene assay using stable **Agrobacterium rhizogenes**  
transformation of plant roots  
IN Taylor, Christopher G.; Huang, Yong  
PA Monsanto Co., USA  
SO PCT Int. Appl., 19 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2000012735	A2	20000309	WO 1999-US19745	19990831
	WO 2000012735	A3	20010531		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,  
 CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
 IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,  
 MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,  
 SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG,  
 KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,  
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,  
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 CA 2341324 AA 20000309 CA 1999-2341324 19990831  
 AU 9962408 A1 20000321 AU 1999-62408 19990831  
 EP 1119631 A2 20010801 EP 1999-949562 19990831  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO  
 BR 9913651 A 20010925 BR 1999-13651 19990831  
 JP 2002524056 T2 20020806 JP 2000-567721 19990831  
 PRAI US 1998-98402P P 19980831  
 WO 1999-US19745 W 19990831

L10 ANSWER 3 OF 3 AGRICOLA Compiled and distributed by the National  
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 (2004) on STN  
 AN 2004:13372 AGRICOLA  
 DN IND43618977  
 TI The use of **Agrobacterium rhizogenes** transformed roots  
 to obtain transgenic shoots of the apple rootstock Jork 9.  
 AU Pawlicki-Jullian, N.; Sedira, M.; Welander, M.  
 AV DNAL (QK725.P53)  
 SO Plant cell, tissue and organ culture, p. 163-171  
 ISSN: 0167-6857  
 NTE In the special issue: Adventitious regeneration / edited by T. Geier, M.B.  
 Schroeder and G.J.M. de Klerk.  
 Includes references  
 DT Article  
 FS Non US  
 LA English

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 L7 34 S (CHIMERA OR CHIMERIC) AND L3  
 L8 19 DUP REM L7 (15 DUPLICATES REMOVED)  
 L9 5 S (CHIMERIC PLANT) AND L3  
 L10 3 DUP REM L9 (2 DUPLICATES REMOVED)

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FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 19:08:20 ON 24 SEP 2004  
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 L2 385616 S STEM OR HYPOCOTYL AND L1

L3	649 S (STEM OR HYPOCOTYL) AND L1
L4	30 S K599
L5	26 S L1 AND L4
L6	14 DUP REM L5 (12 DUPLICATES REMOVED)
L7	34 S (CHIMERA OR CHIMERIC) AND L3
L8	19 DUP REM L7 (15 DUPLICATES REMOVED)
L9	5 S (CHIMERIC PLANT) AND L3
L10	3 DUP REM L9 (2 DUPLICATES REMOVED)